Brent Barbachem

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PROFESSIONAL OVERVIEW

Motivated software engineer with more than seven years of experience producing clean and maintainable code, managing development teams, and designing systems. Experienced in various development and design techniques.

SOFTWARE SKILLS

Proficient	Go, C, C++, Python, Bash, GCP,LOGO, Docker, CMake, Google Protobuf, DDS, CAN, Linux/Unix
Familiar	AWS, Java, SQL, Bash, Lua, C#, R, CI/CD, OpenGL, REST, Qt, Ogre, ArcGIS, Windows

PROFESSIONAL EXPERIENCE

SENIOR SOFTWARE ENGINEER | RED HAT — MARCH 2022 - PRESENT

- GCP and AWS Tasks for the Openshift Installer.
- Ensure that Openshift Ansible is maintained and serviceable for all customers.
- Ensure Openshift Ansible was migrated to the newest versions of Ansible as the architecture changed.
- Fix bugs submitted for Openshift Installer and Openshift Ansible.
- Code reviews for open source products.
- Design and implementation of epic tasks

SOFTWARE ARCHITECT | HUNTINGTON INGALLS INDUSTRIES (ACQUIRED SPATIAL INTEGRATED SYSTEMS, INC) — JULY 2017 – MARCH 2022

- Lead engineer designing and implementing Unmanned Maritime Autonomy Architecture (UMAA) services
- Architect for all major projects for the autonomy group. Managed software tasking through the entire task lifecycle.
- Deploy high volume software requests to customers during live and simulated events.
- Design and implementation of autonomous behaviors/missions for unmanned vehicles.
- Maintain and contribute to custom RTI DDS extensions. Libraries were written and maintained in multiple programming languages. Solved complex participant issues spanning all core projects.

SCIENTIST | SPACE AND NAVAL WARFARE SYSTEM CENTER ATLANTIC — NOV 2012 – JULY 2017

- Implemented custom storage system with required execution rate greater than 500 hz.
- Designed and implemented various parallel and serial communications systems.
- Lead software engineer for research project to analyze real-time audio information to determine emotional state. Utilized java and python to analyze big data.
- Backend and frontend development for distributed simulation environment using federations.

PROJECTS

OPENSHIFT INSTALLER | RED HAT.

- Software engineer that focuses on GCP development and installation, supporting openshift ansible, conducting code reviews, and designing and managing epic level tasks. I work with internal teams and customers to ensure that the product is user friendly, all capabilities are maintained, and new features fulfill requirements.
- Utilized: Go, Python, bash, Podman, terraform, and AWS/GCP/Azure golang libraries.

JANUS | HUNTINGTON INGALLS INDUSTRIES / SPATIAL INTEGRATED SYSTEMS INC.

- Lead software engineer that managed a team of 8 developers to integrate the core autonomy solution with the graphical system and mechanical systems. The final product was service oriented and maintained with containers.
- Utilized: C++, Python, Synchronous and Asynchronous libraries, bash, Docker, RPMs, CAN, RTI DDS

SUPER SWARM | SPATIAL INTEGRATED SYSTYEMS INC.

- Project lead engineer managing team of 10 engineers. Built the command-and-control system using Qt and Ogre with C++. Integrated with numerous third-party companies to integrate our autonomy system on new vehicles. Established a secure communications network utilizing radios, radars and Bluetooth devices.
- Utilized: C++, Python, bash, RPMs, CAN, RTI DDS, Qt, Ogre, ArcGIS

WSN-12 | SPAWAR

- Created simulated legacy systems using Python. Designed and implemented parallel and serial communications systems capable of executing for months without failure. Implemented the prototype system display with Cairo. Implemented custom data storage with synchronous execution rates greater than 500 hz.
- Utilized: C, C++, Python, Bash, RPMs, X, Cairo, NTDS

EDUCATION

OLD DOMINION UNIVERSITY | M.E. MODELING SIMULATION & VISUALIZATION ENGINEERING (MSVE) MAY 2016

JAMES MADISON UNIVERSITY | B.S. COMPUTER SCIENCE MAY 2014